

**Process for the automatic production of a processor from  
a machine description**

**Summary**

The invention is based on the task to undertake machine descriptions, with which an automated optimal hardware design of SIMD processors can be carried out. This is solved by the fact that functional units are selected from a criterion in the machine description, which is vector processible. A first or second reduced functional unit are selectively defined from a respective vector-processing functional unit , in which the reduced functional units process only a data element of a vectoral value. All reduced functional units, which use common control signals for the processing of a respective data element belonging to the vectoral value, are condensed to a disk. Reduced functional units, which process the same data elements in a sequence at least indirectly, are condensed to a disk module. The disk is reproduced with the contained reduced functional units so often that all reduced functional units represent the functionality of their respective selected vector-processing functional unit.

(Fig.)